

> Step 1

Runtime characteristics are varying from application to application. We have three types of applications. All three applications perform some kind of transaction processing, but those transactions may be different in nature. A Web server processes numerous transactions typically involving small amounts of data. Thus, transaction throughput is critical. A database server is similar, but the data transferred may be much larger. A bioinformatics data server will deal with huge data sets where transactions processed is not nearly as critical as data throughput.

> Step 2

When identifying the runtime characteristics of the application, you are implicitly identifying characteristics for evaluation. For a web server, transactions per second are a critical metric. For the bioinformatics data server, data throughput is critical. For a database server, you will want to balance both criteria.

Step 1

When we find to server in the marketplace then we follow key aspects like scalability, speed, security, availability and support for dynamic modules. Some of the most popular Web servers are: Zeus Web Server, Apache Web Server, iPlanet Web Server, Internet Information Server (IIS), Roxen Web Server, Jigsaw, Sambar Server, Sun Java System Web Server and so on.

Step 2

For our running applications like E-commerce, online storage, communication we choose Zeus Web Server. It is the most scalable, high-performance Web server software available, underpinning business-critical solutions for the world's leading Web hosting, content provider and secure e-commerce companies. Flexible Web-based management, extensive integration capabilities, and the most comprehensive range of features available from commercial server software, combine to provide fully extensible and future-proof Web-based solutions. It can be a lot more expensive than Apache, but for the price, we get a lot of service and functionality.

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Characteristics of a Sun Fire x4150 will attempt to predict its performance. You can use the same data and characteristics here. Sun Fire x4150 has multiple configurations. Find similar measurements for the server that you have selected. Most of this data should be available online. If not, contact the company providing the server and see if such data is available. It's a reasonably simple task to use a spreadsheet to evaluate numerous configurations and systems simultaneously. If you design your spreadsheet carefully, you can simply enter a table of data and make comparisons quickly. This is exactly what you will do in industry when evaluating systems.

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Although analytic analysis is useful when comparing systems, nothing beats hands-on evaluation. There are a number of test suites available that will serve your needs here. Virtually all of them will be available online. Look for benchmarks that generate transactions for the web server, generate large data transfers for the bioinformatics server, and a combination of the two for the database server.